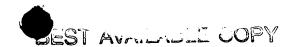
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What is Claimed is:



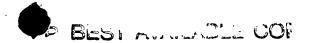
- 1. A method for decreasing interferences which result in inaccurate readings in serum or plasma containing assay samples of specific binding assays comprising adding an effective amount of a large polycation to serum or plasma containing assay samples during the specific binding assay.
- 2. The method of claim 1 wherein the large polycation has a molecular weight of 3,000 daltons or greater.
- 3. The method of claim 1 wherein the large polycation is a polylysine, polyornithine, polybrene or MERQUAT.
- 4. The method of claim 3 wherein the large polycation comprises a polylysine with a molecular weight ranging between 5,200 and 11,200 daltons.
- 5. The method of claim 4 wherein the large polycation comprises polylysine with a molecular weight of 8,800 daltons.
- 6. The method of claim 1 wherein the specific binding assay measures thyroid stimulating hormone, free prostate specific antigen, alpha fetal protein,, Hepatitis B core antibody, Hepatitis B surface antibody or human immunodeficiency virus.
- 7. The method of <u>claim 1</u> wherein said specific binding assay is performed on a solid phase.
- 8. The method of elaim 7 wherein said solid phase comprises paramagnetic microparticles.
- 9. A method for decreasing interferences which result in inaccurate readings in serum or plasma containing assay samples of a thyroid stimulating hormone



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specific binding assay comprising adding a large polycation to serum or plasma containing assay samples during the thyroid stimulating hormone specific binding assay.

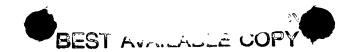
- 10. The method of claim 9 wherein the large polycation has a molecular weight of 3,000 daltons or greater.
- 11. The method of claim 9 wherein the large polycation is a polylysine, polybrene or MERQUAT.
- 12. The method of claim 11 wherein the large polycation comprises a polylysine with a molecular weight ranging between 5,200 and 11,200 daltons.
- 13. The method of claim 12 wherein the large polycation comprises polylysine with a molecular weight of 8,800 daltons.
- 14. A method for decreasing interferences which result in inaccurate readings in serum or plasma containing assay samples of a thyroid stimulating hormone specific binding assay comprising:
- a) forming a first complex by incubating a serum or plasma sample with paramagnetic microparticles coated with anti- β TSH antibody and an assay diluent which comprises a large polycation, for a time and under conditions which allow the thyroid stimulating hormone present in the sample to bind to the anti- β TSH antibody coated microparticles;
- (b) forming a second complex by incubating the first complex with an acridinium labeled conjugate comprising an anti-α TSH antibody, for a time and under conditions which allow the conjugate to bind to the first complex;
 - (c) creating a chemiluminescent reaction in the second complex; and
- (d) measuring the chemiluminescent reaction as relative light units wherein the amount of thyroid stimulating hormone in the plasma or serum sample is directly related to the measured relative light units.





- 15. A method for decreasing interferences which result in inaccurate readings in serum or plasma containing assay samples of a free prostate specific antigen specific binding assay comprising adding a large polycation to serum or plasma containing assay samples during the free prostate specific antigen specific binding assay.
- 16. The method of claim 15 wherein the large polycation is a polylysine or polyornithine.
- 17. A method for decreasing interferences which result in inaccurate readings in serum or plasma containing assay samples of a free prostate specific antigen specific binding assay comprising:
- (a) forming a first complex by incubating a serum or plasma sample with paramagnetic microparticles coated with an antibody specific for free PSA, for a time and under conditions which allow the free PSA present in the sample to bind to the antibody coated microparticles;
- (b) forming a second complex by incubating the first complex with an acridinium labeled conjugate comprising an anti-PSA antibody, for a time and under conditions which allow the conjugate to bind to the first complex;
 - (c) creating a chemiluminescent reaction in the second complex; and
- (d) measuring the chemiluminescent reaction as relative light units wherein the amount of prostate specific antigen in the plasma or serum sample is directly related to the measured relative light units.
- An improved specific binding assay kit for plasma and serum samples comprising a solution containing a large polycation.
- 19. The improved specific binding assay kit of claim 18 wherein the large polycation has a molecular weight of 3,000 daltons or greater.
- 20. The improved specific binding assay kit of claim 15 wherein the large polycation is a polylysine, polybrene or MERQUAT.

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- The improved specific binding assay kit of claim 18 wherein the specific binding assay measures thyroid stimulating hormone, free prostate specific antigen, alpha fetal protein, Hepatitis B core antibody, Hepatitis B surface antibody or human immunodeficiency virus.
- 22. An improved kit for detection of thyroid stimulating hormone comprising:
 - (a) mouse, monoclonal anti-β TSH coated microparticles;
 - (b) mouse, monoclonal anti-α TSH acridinium-labeled conjugate; and
 - (c) a modified TSH assay diluent comprising a large polycation.
- 23. The kit of claim 19 wherein the large polycation is a polylysine having a molecular weight from 5,200 to 1 200 daltons.
- 24. An improved kit for detection of free prostate specific antigen comprising:
 - (a) mouse, monoclonal anti-Free PSA coated microparticles in a diluent comprising a large polycation;
 - (b) (b) mouse, monoclonal anti- PSA acridinium-labeled conjugate;
- 25. The kit of claim 24 wherein the large polycation is a polylysine or polyornithine.
- 26. A method for decreasing interferences which result in inaccurate readings in serum or plasma containing assay samples of a total prostate specific antigen specific binding assay comprising:
- (a) forming a first complex by incubating a serum or plasma sample with paramagnetic microparticles coated with an antibody which binds both free and complexed PSA, for a time and under conditions which allow the PSA present in the sample to bind to the antibody coated microparticles;







- (b) forming a second complex by incubating the first complex with an acridinium labeled conjugate comprising an anti-PSA antibody, for a time and under conditions which allow the conjugate to bind to the first complex;
 - (c) creating a chemiluminescent reaction in the second complex; and
- (d) measuring the chemiluminescent reaction as relative light units wherein the amount of prostate specific antigen in the plasma or serum sample is directly related to the measured relative light units.